

93214.036 **PATENT** 

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In re application of:

Exámining Group: 3652

Freet et al.

Examiner: Charles A. Fox

Serial No.: 10/713,724

Date:

May 4, 2007

Filed:

November 13, 2003

For:

Internal Lift for Light Duty Motor Vehicle

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### **BRIEF ON APPEAL**

Hon. Commissioner for Patents Alexandria, Virginia 22313 SIR:

Enclosed is a Brief in support of an appeal from the final rejection of claims 11, 12, 13, 15, 16, 23, 24, 26, and 27 in the Office Action dated March 9, 2007, in the above-identified application. A check in payment of the requisite fee under 37 CFR 41.20(b)(2) is enclosed.

An oral hearing is waived.

Respectfully submitted,

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**Attorney for Appellants** 



### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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#### **BRIEF ON APPEAL**

# I. Real Party in Interest

The real party in interest is Vantage Mobility International, LLC by assignment recorded at Reel 014708, frame 0552.

## II. Related Appeals and Interferences

None.

#### III. Status of Claims

Claims 11, 12, 13, 15, 16, 23, 24, 26, and 27 stand rejected.

## IV. Status of Amendments

All amendments have been entered.

# V. Summary of Claimed Subject Matter

The invention relates to an internal lift for a light duty motor vehicle, such as a minivan, in which the lift includes two telescoping members, vertical and horizontal, for moving a tool. The vertical telescoping member has a particular construction that renders it strong, quiet, and chatter free.

The following table relates the appealed claims to the specification. The table is not exhaustive of all possible cross-references.

.1.

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a body attached to a floor and enclosing a protected volume, said vehicle further including at least one door, in addition to a door for a driver of the vehicle, to provide access to the protected volume, the improvement comprising:  a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 1, FIG. 3  page 5, lines 3—4  FIG. 2  page 5, line 13  FIG. 2; page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, line 13  FIG. 2; page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, line 13  FIG. 1, FIG. 4, FIG. 5  page 5, line 13  FIG. 1, FIG. 1
protected volume, said vehicle further including at least one door, in addition to a door for a driver of the vehicle, to provide access to the protected volume, the improvement comprising:  a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and
including at least one door, in addition to a door for a driver of the vehicle, to provide access to the protected volume, the improvement comprising:  a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and
door for a driver of the vehicle, to provide access to the protected volume, the improvement comprising:  a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and
improvement comprising:  a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and
a lift including a first telescoping member coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 2; page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, lines 9–11  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16
coupled to said vehicle within said protected volume;  a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  TIGL 12  page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, lines 9–11  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16
a second telescoping member coupled to said first telescoping member; and a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 1; page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, line 14  FIG. 1, FIG. 9, FIG. 12  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
a second telescoping member coupled to said first telescoping member; and  a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 2; page 5, line 14  FIG. 1, FIG. 4, FIG. 5  page 5, lines 9–11  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16
a tool coupled to said second telescoping member; and  a tool coupled to said second telescoping member;  member;  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 1, FIG. 4, FIG. 5  page 5, lines 9–11  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16
member;  page 5, lines 9–11  wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  TIG. 1, TIG. 1, TIG. 3  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16
wherein the tool is movable along two orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  page 5, lines 9–11  FIG. 1; page 5, line 12  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
orthogonal axes of motion;  wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
wherein at least said second telescoping member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  FIG. 9, FIG. 10, FIG. 11  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
member includes at least two nested slides;  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
page 7, lines 11–15  a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side; the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  page 7, lines 11–15  FIG. 12  page 8, line 16  FIG. 12  page 8, line 20
one side thereof and a second pair of rollers on a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  page 8, line 16  FIG. 12  page 8, line 20
a side opposite the first side;  the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and  page 8, line 16  FIG. 12  page 8, line 20
the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and
opposite sides thereof; and page 8, line 20
opposite sides thereof; and page 8, line 20
said channels enclose said rollers to FIG. 12; page 8, lines 21–23
provide said telescoping action.
12. The vehicle as set forth in claim 11
wherein
said first slide includes a first block on one FIG. 12 side thereof and a second block on a side
opposite the first side; page 8, lines 17–19;
page 8, lines 22–23
said channels enclose said blocks; FIG. 12; page 8, line 22
said blocks are dimensioned to engage FIG. 12
one side of the U in said U-shaped channels, page 8, lines 24–28
whereby said blocks pre-load the rollers .
wherein said first block is located between said
first pair of rollers and said second block is page 8, line 25
mar pair or joilers and sale second block is

15. The vehicle as set forth in claim 11 and further including:	The second secon
a first motor coupled to said first	FIC 15
telescoping member for moving said member	FIG. 15
along a first axis of motion;	page 9, line 31
a second motor coupled to said second	FIG. 13
telescoping member for moving said member	
along a second of said two orthogonal axes of	page 9, line 18
motion;	
a control circuit including a first switch,	FIG. 17, FIG. 18, FIG. 19, FIG. 20, FIG. 21
said control circuit driving said motors in a	
predetermined direction and sequence for	page 10, lines 29–32
operation in said two axes of motion by	
actuation of said switch.	
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16. A lift for a light duty motor vehicle	
having a body attached to a floor, said lift	
comprising:	AND COMPANY OF THE PARTY OF THE
a first telescoping member including a	FIG. 2
flange for attaching said lift to said vehicle	nage 5 line 13
without significant structural changes said	page 5, line 13
vehicle;	
a second telescoping member coupled to	FIG. 2; page 5, line 14
said first telescoping member; and	
a platform coupled to said second	FIG. 1; page 5, line 8
telescoping member;	, , , , , , , , , , , , , , , , , , , ,
wherein the platform is movable along two	FIG. 2; page 5, line 12
orthogonal axes of motion;	110. 2, page 3, inte 12
wherein at least said second telescoping	FIG. 9, FIG. 10, FIG. 11
member includes at least two nested slides;	
	page 7, lines 11–15
a first slide includes a first pair of rollers on	FIG. 12
one side thereof and a second pair of rollers on	page 8, line 16
a side opposite the first side;	
the second of said two nested slides	FIG. 12
includes a pair of U-shaped channels on	page 8, line 20
opposite sides thereof; and	
said channels enclose said rollers to	FIG. 12; page 8, lines 21–23
provide said telescoping action.	
23. The lift as set forth in claim 16	
wherein	and the second s

said first slide includes a first block on one side thereof and a second block on a side opposite the first side;	FIG. 12 page 8, lines 17–19; page 8, lines 22–23
said channels enclose said blocks;	FIG. 12; page 8, line 22
said blocks are dimensioned to engage one side of the U in said U-shaped channels, whereby said blocks pre-load the rollers.	FIG. 12 page 8, lines 24–28
24. The lift as set forth in claim 23 wherein said first block is located between said first pair of rollers and said second block is located between said second pair of rollers.	FIG. 12 page 8, line 25
26. The lift as set forth in claim 16 and further including:	
a first motor coupled to said first telescoping member for moving said member along a first axis of motion;	FIG. 15 page 9, line 31
a second motor coupled to said second telescoping member for moving said member along a second of said two orthogonal axes of motion;	FIG. 13 page 9, line 18
a control circuit including a first switch, said control circuit driving said motors in a predetermined direction and sequence for operation in said two axes of motion by actuation of said switch.	FIG. 17, FIG. 18, FIG. 19, FIG. 20, FIG. 21 page 10, lines 29–32
27. The lift as set forth in claim 26 wherein said first switch is coupled to a microprocessor.	FIG. 17, FIG. 18, FIG. 19, FIG. 20, FIG. 21 page 10, lines 11–12; page 13, line 31, to page 14, line 6;

# VI. Grounds of Rejection for Review on Appeal

- A. Are claims 11 and 16 anticipated by Williams et al. (US 6,726,435)?
- B. Are claims 12, 13, 23, and 24 unpatentable over Williams et al. in view of Walkden (5,795,125)?
- C. Are claims 15, 26, and 27 unpatentable over Williams et al. in view of Ringdahl et al. (6,357,992)?

## VII. Argument

Claims 11 and 16 stand rejected as anticipated by Williams et al. The following restates the rejection using the terminology of the Williams et al. patent.

The Examiner reads the recitation of a first telescoping member on "stationary frame member 16" (FIG. 2 of the Williams et al. patent). For the sake of argument, one can consider a first telescoping member as reading on the combination of stationary frame member 16 and movable frame member 14, as illustrated in FIG. 2 of the Williams et al. patent.

The Examiner reads the recitation of a second telescoping member on "upright powered lift mechanism 24" (FIG. 2 of the Williams et al. patent). Section 50 of mechanism 24 is disclosed as rigidly connected to movable plate 28.

The Examiner reads the recitation of a tool on platform 12.

The further recitations of claim 11 and 16 do not read on the disclosure of the Williams et al. patent. There is no anticipation.

The Examiner argues "There is no claim language that defines either of the two telescopic members as being the first or the second. Therefore no mater [sic] which the Examiner picks as the first ...." The assertions are plainly mistaken. The first telescoping member is recited as coupled to the vehicle. The second telescoping member is recited as coupled to a tool. The members are clearly identified and clearly distinguishable.

The Examiner asserts that "the tool as claimed is connected to both" [telescoping members?]. This is also plainly mistaken. The tool (platform in claim 16) is recited as coupled only to the second telescoping member.

The Examiner asserts "otherwise it [the tool/platform] would only move in either the vertical or horizontal direction, not both as claimed." This is not only contrary to the claims, it is contrary to the disclosure of the Williams et al. patent.

Claims 12, 13, 23, and 24 stand rejected as unpatentable over Williams et al. in view of Walkden. Neither patent discloses or suggests a vertical telescoping member that has the recited construction. The Walkden patent is merely cumulative in disclosing a horizontally moving platform on rollers. The problems relating to the vertical member are quite different from those attendant upon a horizontal

member. The mechanical stresses are different. The only force addressed by the Williams et al. patent is weight [column 3, lines 61–65].

The recited blocks pre-load the rollers. The plastic guide strip (FIGS. 5, 6, 7) disclosed in the Walkden patent is described as follows.

"A plastic guide strip 72 extends lengthwise along the exterior of the sidewall 62 and serves to guide the slide member 22 within the platform assembly 20. The guide strip 72 helps to ensure that the sliding member 22 is centrally located within the platform assembly 20 thereby allowing for smooth extension and retraction of the ramp 24. The guide strip may be made from any rigid, durable plastic such as polyvinyl chloride or other similar material." [column 4, lines 54–61]

As apparent from the figures and from the absence of any description, there is no preloading of the rollers as recited. With no evidence of obviousness, there is no obviousness. The Examiner merely concludes that it would have been obvious. Conclusory statements are not evidence. Rejections must be based upon the evidence of record.

The Walkden patent overcomes none of the deficiencies noted in the Williams et al. patent.

Claims 15, 26, and 27 stand rejected as unpatentable over Williams et al. in view of Ringdahl et al. The Ringdahl et al. patent does not disclose motion along two orthogonal axes. How can the patent teach a single switch for such?

There is no disclosure that switch 502 is coupled to a microprocessor, as alleged by the Examiner. On the contrary, separate command switches are illustrated in the lower right hand corner of FIG. 72 in the Ringdahl et al. patent. FIG. 71 gives some of pin inputs to a microprocessor. Pin 33 is "up," pin 20 is "down," pin 18 is "stow," and pin 19 is "deploy." These are separate inputs and control separate parts of the operation. FIGS. 67, 68 are flow charts of the sequence for operating the lift described in the Ringdahl et al. patent. There is no disclosure of a single switch operating the lift. There is no disclosure of how such could be done.

The Ringdahl et al. patent overcomes none of the deficiencies noted in the Williams et al. patent.

# Conclusion

In view of the foregoing, it is respectfully submitted that the rejections of claims 11, 12, 13, 15, 16, 23, 24, 26, and 27 are in error and should be reversed.

Respectfully submitted,

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# VII. Claims Appendix

- 11. In a light duty motor vehicle having a body attached to a floor and enclosing a protected volume, said vehicle further including at least one door, in addition to a door for a driver of the vehicle, to provide access to the protected volume, the improvement comprising:
- a lift including a first telescoping member coupled to said vehicle within said protected volume;
  - a second telescoping member coupled to said first telescoping member; and a tool coupled to said second telescoping member;
  - wherein the tool is movable along two orthogonal axes of motion;
- wherein at least said second telescoping member includes at least two nested slides;
- a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;

the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and

said channels enclose said rollers to provide said telescoping action.

### 12. The vehicle as set forth in claim 11 wherein

said first slide includes a first block on one side thereof and a second block on a side opposite the first side;

said channels enclose said blocks;

said blocks are dimensioned to engage one side of the U in said U-shaped channels, whereby said blocks pre-load the rollers.

- 13. The vehicle as set forth in claim 12 wherein said first block is located between said first pair of rollers and said second block is located between said second pair of rollers.
  - 15. The vehicle as set forth in claim 11 and further including:
- a first motor coupled to said first telescoping member for moving said member along a first axis of motion;

a second motor coupled to said second telescoping member for moving said member along a second of said two orthogonal axes of motion;

a control circuit including a first switch, said control circuit driving said motors in a predetermined direction and sequence for operation in said two axes of motion by actuation of said switch.

- 16. A lift for a light duty motor vehicle having a body attached to a floor, said lift comprising:
- a first telescoping member including a flange for attaching said lift to said vehicle without significant structural changes said vehicle;

a second telescoping member coupled to said first telescoping member; and a platform coupled to said second telescoping member;

wherein the platform is movable along two orthogonal axes of motion;

wherein at least said second telescoping member includes at least two nested slides;

a first slide includes a first pair of rollers on one side thereof and a second pair of rollers on a side opposite the first side;

the second of said two nested slides includes a pair of U-shaped channels on opposite sides thereof; and

said channels enclose said rollers to provide said telescoping action.

#### 23. The lift as set forth in claim 16 wherein

said first slide includes a first block on one side thereof and a second block on a side opposite the first side;

said channels enclose said blocks;

said blocks are dimensioned to engage one side of the U in said U-shaped channels, whereby said blocks pre-load the rollers.

- 24. The lift as set forth in claim 23 wherein said first block is located between said first pair of rollers and said second block is located between said second pair of rollers.
  - 26. The lift as set forth in claim 16 and further including:

- a first motor coupled to said first telescoping member for moving said member along a first axis of motion;
- a second motor coupled to said second telescoping member for moving said member along a second of said two orthogonal axes of motion;
- a control circuit including a first switch, said control circuit driving said motors in a predetermined direction and sequence for operation in said two axes of motion by actuation of said switch.
- 27. The lift as set forth in claim 26 wherein said first switch is coupled to a microprocessor.

# IX. Evidence Appendix

There were no affidavits filed in this application.

# X. Related Proceedings Appendix

There are no related proceedings.